



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/698,252      | 10/31/2003  | Cathleen H. Chang    | BOEI-1-1226         | 2942             |

7590 11/15/2005

Paul C.Cullom, Esq.  
BLACK LOWE & GRAHAM PLLC  
Suite 4800  
701 Fifth Avenue  
Seattle, WA 98104

EXAMINER

UMEZ ERONINI, LYNETTE T

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

1765

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/698,252

Applicant(s)

CHANG ET AL.

Examiner

Lynette T. Umez-Eronini

Art Unit

1765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 21-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 21-26 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                                                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                                       | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/20/04 &amp; 4/21/05</u> . | 6) <input type="checkbox"/> Other: _____                                                |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of claims 1-20 in the reply filed on 10/21/2005 is acknowledged.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saukaltis (US 2,941,949) in view of Gulla (US 3,551,122).

As to claims 1-20, Saukaltis teaches cleaning and pickling metal surfaces of aluminum using mineral acids such as phosphoric, sulfamic, and hydrofluoric acids (column 1, lines 15-19 and 25-30). Saukaltis discloses in one example, using 10 grams of sulfamic acid with sufficient water to make 100 cc when inhibited with 1/10 gram triphenyl sulfonium chloride (column 2, lines 17-29). Saukaltis further discloses cleaning and pickling metals by continuously passing the metal to be pickled through a number of baths in a regulated manner or by immersing the articles in the bath for a suitable period of time; and using the baths at 140° to 190°F (column 2, lines 39-47). The aforementioned reads on,

A process for combined chemically cleaning and etching parts made of aluminum and/or aluminum alloys comprising: (a) providing a cleaning and etching solution comprising:

- (1) phosphoric acid;
- (2) hydrogen fluoride;
- (3) sulfamic acid; and
- (5) balance water; and

(b) contacting said parts with said solution for a time sufficient to achieve the desired amount of cleaning and etching.

Saukaltis differs in failing to teach a cleaning and etching solution comprising:  
the grams/liter of phosphoric, hydrogen fluoride, and sulfamic acid;

- (4) 55-95 grams/liter of glycol ether;

(c) periodically measuring the etching rate of said solution to determine if the etching rate is at or above the required minimum rate;

(d) when the etching rate is below the required minimum rate, adding sufficient hydrogen fluoride to restore the etching rate above the required minimum rate; and

(e) periodically adding sufficient sulfamic acid to prevent the formation of scale made of hydrated aluminum fluoride, **in claims 1-7, 10-16; and 19; and**

wherein the process is run at ambient temperature, **in claims 8, 18, and 20.**

Gulla teaches typical organic solvents include propylene glycol and ethylene glycol; and ethers of ethylene glycol (column 3, lines 26-33).

Gulla illustrates glycol ether is known as a solvent and the combination of Saukaltis and Gulla further illustrates the specific combination of a cleaning and etching solution that comprises phosphoric, hydrogen fluoride, sulfamic and glycol ether is known. As a result, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select any concentration of the said components of cleaning and etching solution and temperature of the cleaning and etching process; along with (c) periodically measuring the etching rate of said solution to determine if the etching rate is at or above the required minimum rate; (d) adding sufficient hydrogen fluoride to restore the etching rate above the required minimum rate, when the etching rate is below the required minimum rate; and (e) periodically adding sufficient sulfamic acid to prevent the formation of scale made of hydrated aluminum fluoride, which would effectively accomplish the disclosed composition because it has been held that there is no invention where the difference in proportions is not critical and was ascertained by

Art Unit: 1765

routine experimentation because the determination of workable ranges is not considered inventive. See *In re Swain and Adams*, 70 USPQ 412 (CPA 1946).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynette T. Umez-Eronini whose telephone number is 571-272-1470. The examiner is normally unavailable on the First Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on 571-272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit 1765

ltue

September 22, 2005

NADINE C. NORTON  
SUPERVISOR, PATENT EXAMINER

